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EXAMINER

DENNISON, JERRY B

ART UNIT

PAPER NUMBER

2143

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Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/810,410	<b>Applicant(s)</b> MARCO ET AL.	
	<b>Examiner</b> J. Bret Dennison	<b>Art Unit</b> 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 07 September 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-28,30-47 and 49-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28,30-47 and 49-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Action is in response to Application Number 09/810,410 received on 26 November 2004.
2. Claims 1-28, 30-47, and 49-57, and 58-60 are presented for examination.

#### ***Claim Objections***

3. Claim 60 is objected to because of the following informalities: Claim 60 includes the limitation "the system at least one acceleration server". The term "comprising" may have been accidentally deleted. Examiner will interpret the limitation to read "the system comprising at least one acceleration server". Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6, 7, 9, 10, 14-18, 23-30, 32, 35, 36, 38, 39, 43-47 and 52-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heddaya et al. (U.S. Patent Number 6,622,157) in view of Cieslak et al. (U.S. Patent Number 6,240,461).

4. Regarding the claimed invention, Examiner interprets the acceleration server as nothing more than a proxy server which is well known in the art to have a storage capability wherein frequently retrieved information could be stored rather than simply

Art Unit: 2143

passing it through to the requesting platform. By storing frequently requested data, subsequent requests for the same data could be serviced without having to retrieve the requested data from its original source. As noted in the Background of the Invention of Cieslak (U.S. 6,240,461), using proxy servers to accelerate access is well known in the art. As disclosed by Heddaya (6,622,157) the work of servicing service requests by offloading from the home server to other nodes within the network is equally applicable to peer-to-peer networks.

5. Regarding claims 1 and 30, Heddaya disclosed method of accelerating receipt of data in a client-to-client network wherein each client in the client-to-client network operates a software program for implementing queries and providing responses, the method comprising the steps of:

- intercepting queries in the client-to-client network;
- storing said intercepted queries in an acceleration server;
- analyzing a direction of said intercepted responses in accordance with a caching policy;
- allowing transmission of a specific intercepted response to a client submitting a specific intercepted query only if a specific client which served as a source of said specific intercepted response is available on the client-to-client network and only if said specific client contains data identical to said specific intercepted response in a directory of said specific client and denying transmission of said specific intercepted response in all other cases; and

transmitting said intercepted responses to clients submitting intercepted queries (Heddaya, col. 6, lines 36-43, 50-60, col. 7, lines 50-55, col. 8, lines 10-16, 40-50, 60-65, col. 10, lines 10-20, Heddaya disclosed a method and system applicable to peer-to-peer networks where an intermediate node intercepts client requests and determines a node that can service the request and allows transmission of a response from a node that can serve as the source for the request).

Heddaya also disclosed routers having associated cache servers, and intercepting requests and providing a response from their associated cache servers (Heddaya, col. 7, lines 50-55).

However, Heddaya does not explicitly state intercepting and storing a single intercepted response, which originates in at least two separate and distinct clients.

In an analogous art, Cieslak disclosed a method and apparatus for caching network data traffic wherein when a client request is received and the requested information is not already stored in the caching engine, it downloads the information, stores it for future use, and transmits it to the requesting platform (Cieslak, col. 2, lines 50-60).

One of ordinary skill in the art would use the teachings of Heddaya in a client-to-client network environment because Heddaya suggested that the teachings are equally applicable to peer-to-peer networks (Heddaya, col. 6, lines 50-60).

Heddaya and Cieslak are analogous art because both teachings include intermediate nodes that intercepts data to fulfill requests.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the caching system of Cieslak into the caching system of Heddaya to improve the efficiency with which data are transferred between nodes of the system (Cieslak, col. 2, lines 20-25).

6. Regarding claims 7 and 36, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 6 and 35, including wherein said data is in a format selected from the group consisting of MP3, DVid, MPEG-2, MPEG-1, MJPEG, MPEG-4, ActiveMovie/video for Windows (.avi), Quicktime (.mov), Realvideo (.rm and .ram), H263.1, HTML, Flash, Gif, Tif, mpeguid and exe (Cieslak, col. 3, lines 60-67, Cieslak teaches data in multimedia format).

7. Regarding claims 9 and 38, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein an algorithm implements storage of intercepted responses on said acceleration server (Cieslak, col. 2, lines 40-45).

8. Regarding claims 10 and 39, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 9 and 38, including wherein said algorithm includes analysis of a variable based on identification information (Cieslak, col. 2, lines 40-46, Cieslak discloses an algorithm based on the address).

9. Regarding claims 14 and 43, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 10 and 39, including wherein said client information includes at least one datum selected from the group consisting of client connection status, client identification, presence of a specific file on a specific client and presence of a packet derived from a specific file on a specific client (Cieslak, col. 2, lines 40-50 Cieslak teaches files stored in the cache based on address of the packet derived from a file on a specific source/client).

10. Regarding claims 15 and 44, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 10 and 39, including wherein said identification information includes at least one datum selected from the group consisting of file identification, packet identification, client identification, and identification of content within a file (Cieslak, col. 2, lines 40-50).

11. Regarding claims 16 and 45, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein a single query and a single response are each independently intercepted by at least two acceleration servers of said at least one acceleration server (Cieslak, col. 4, lines 25-33).

12. Regarding claims 17 and 46, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein multiple acceleration servers of said at least one acceleration server have a relative

Art Unit: 2143

configuration selected from the group consisting of in series and in parallel (Cieslak, col. 4, lines 25-33).

13. Regarding claims 18 and 47, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein said at least one acceleration server is located in a location selected from the group consisting of within a local area network, on a server belonging to an Internet service provider, at a cable television provider junction, at a satellite relay link, and within an ADSL junction (Cieslak, col. 3, lines 35-50).

14. Regarding claims 23 and 52, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein said acceleration server has a configuration selected from the group consisting of unidirectional and bi-directional (Cieslak, col. 4, lines 20-35).

15. Regarding claims 24 and 53, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein said acceleration server further functions as a client in the client to client network (Cieslak, col. 2, lines 29-67, Cieslak teaches that the system acts as the responding client if it contains the requested data).

16. Regarding claims 25 and 54, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein transmitting



said intercepted responses to clients submitting intercepted queries includes simultaneous transmission of portions of a single data set from at least two of said acceleration servers (Cieslak, col. 2, lines 40-50, Cieslak teaches that multiple caches may be used in handling a client's request, wherein the request is based on an algorithm to find the different addresses associated with it, which may be split up on different caches).

17. Regarding claims 26 and 55, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein said acceleration server is further designed and configured to act as a transparent proxy server (Cieslak, col. 1, last paragraph, col. 2, lines 45-50).

18. Regarding claims 27 and 56, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30, including wherein if the requested information is not in the caching engine, the caching engine retrieves the data from the original destination platform and transmits it to the requesting platform and this is transparent to the user at the requesting platform which operates exactly as if it were communicating with the destination platform (Cieslak, col. 2, lines 53-63).

19. Regarding claim 28, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claim 21, including wherein said specific client which contains data equivalent to said specific intercepted response in a directory thereof comprises at least two separate and distinct clients (Cieslak, col. 4, lines 20-35).

20. Regarding claims 19-22 and 49-51, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1, 2, 30, and 31. The limitations of 19-22 and 48-51 are included in claims 1, 2, 30, and 31, and are therefore rejected under that same prior art used.

Claims 2, 4, 5, 8, 12, 31, 33, 34, 37, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heddaya and Cieslak in view of what is obvious in the art.

21. Regarding claims 2 and 31, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30. Cieslak also discloses requested data being multimedia (Cieslak, col. 3, line 64). Heddaya and Cieslak did not explicitly state wherein said at least one acceleration server is further designed and configured for dividing a specific intercepted response of said intercepted responses into at least two packets; and transmitting said at least two packets to said clients submitting intercepted queries. However, streaming data, which is widely known in the art for transferring multimedia data, includes dividing data up into packets. Therefore it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate dividing responses into at least two packets for the purpose of streaming the multimedia data.

22. Regarding claims 4 and 33, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 3 and 32. Cieslak also discloses

altering the operating system code of an existing router to redirect data traffic (Cieslak, col. 2, lines 35-40) and also that the router could be an internal router in a local area network (Cieslak, col. 3, lines 33-37). Heddaya and Cieslak did not explicitly state wherein said redirecting device is a layer 4 switch. However, it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate a switch as the redirecting device of Cieslak because a router serves the same generic function as a switch, which is directing traffic.

23. Regarding claims 5 and 34, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30. Cieslak also discloses wherein most Internet service providers accelerate access using proxy servers (Cieslak, col. 2, lines 1-3) and that the invention could be with in a local area network (Cieslak, col. 3, lines 35-45). Heddaya and Cieslak did not explicitly state wherein said acceleration server is located in a location selected from the group consisting of within a local area network and in a server belonging to an Internet Service Provider. However, it would have been obvious to one in the ordinary skill at the time of the invention to use the system of Heddaya and Cieslak in an internet service provider because it is common for ISP's to use proxy servers to accelerate traffic.

24. Regarding claims 8 and 37, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 1 and 30. Heddaya and Cieslak did not explicitly state wherein the software program includes at least two software programs.

However, it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate subprograms within a program to include different functionalities of the overall system.

25. Regarding claims 12 and 41, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 10 and 39. Heddaya and Cieslak did not explicitly state wherein said ordinal information includes at least one datum selected from the group consisting of order of receipt and order of retrieval. However, it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate order of receipt into the algorithm because it is included in TCP/IP packets.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Heddaya and Cieslak in further view of Wexler et al. (U.S. Patent Number 6,286,084).

26. Regarding claim 13, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claim 10. Heddaya and Cieslak did not explicitly state wherein said frequency information includes at least one datum selected from the group consisting of frequency of retrieval and frequency of appearance in clients of said client to client network. In an analogous art of networking Wexler discloses a method for populating a cache based on requested data wherein the destinations are sorted in the cache according to the frequency with which they are requested (Wexler, col. 2, last

paragraph). Therefore, it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate Wexler's method of populating a network cache into the teachings of Heddaya and Cieslak for the purpose of improving the efficiency with which data are transmitted over the Internet (Cieslak, col. 1, lines 13-15).

Claims 11, 19-22, 40, and 49-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heddaya and Cieslak in further view of Antonov (U.S. Patent Number 5,884,046).

27. Regarding claims 11 and 40, Heddaya and Cieslak disclosed the limitations, substantially as claimed, as described in claims 10 and 39. Heddaya and Cieslak did not explicitly state wherein said temporal information includes at least one datum selected from the group consisting of time of initial storage, total residence time in storage, elapsed time since last retrieval from storage, average time between retrievals from storage, and time of creation of original file. In an analogous art Antonov discloses a method for sharing data between a plurality of clients in a LAN wherein data entries are based on amount of time of storage (Antonov, col. 7, lines 17-24). Therefore it would have been obvious to one in the ordinary skill in the art the time of the invention to combine Heddaya and Cieslak with Antonov in order to provide data removal after a certain amount of storage time, for the benefit of keeping data in the caches up to date.

Art Unit: 2143

28. Regarding claim 42, Heddaya, Cieslak, and Antonov disclosed the limitations, substantially as claimed, as described in claims 40. Heddaya, Cieslak, and Antonov did not explicitly state wherein said frequency information includes at least one datum selected from the group consisting of frequency of retrieval and frequency of appearance in clients of said client to client network. In an analogous art of networking Wexler disclosed a method for populating a cache based on requested data wherein the destinations are sorted in the cache according to the frequency with which they are requested (Wexler, col. 2, last paragraph). Therefore, it would have been obvious to one in the ordinary skill in the art at the time of the invention to incorporate Wexler's method of populating a network cache with Cieslak and Antonov for the purpose of improving the efficiency with which data are transmitted over the Internet (Cieslak, col. 1, lines 13-15).

### ***Response to Amendment***

29. Applicant's arguments and amendments filed on 26 November 2004 have been carefully considered but they are not deemed fully persuasive. Applicant's arguments are deemed moot in view of the following new grounds of rejection as explained here below, necessitated by Applicant's substantial amendment (i.e., *by incorporating new limitations into the independent claims, which will require further search and consideration*) to the claims which significantly affected the scope thereof.

30. Applicant's arguments with respect to claims 1-28, 30-47, and 49-57, and 58-60 have been fully considered but they are not persuasive. Applicant's arguments include

the failure of previously applied art to expressly disclose the teachings of "client-to-client network caching" and that the prior art teachings "would not function in such a context if an attempt to implement them in such a context were made." [see Applicant's Response, page 14].

31. It is evident from the mappings found in the above rejection that the combination of Heddaya and Cieslak discloses the teaching of client-to-client caching as disclosed in the claimed invention.

32. Client-to-client networking (or Peer-to-peer networking) is a communications model in which each party has the same capabilities and either party can initiate a communication session. In some cases, peer-to-peer communications is implemented by giving each communication node both server and client capabilities. On the Internet, peer-to-peer is a type of transient Internet network that allows a group of computer users with the same networking program to connect with each other and directly access files from one another's hard drives.

33. In the broadest sense, we have two nodes that are accessing each other's files. Both nodes contain client capabilities, and both contain server capabilities. This means that at any instance, for a file transfer to take place, one of the nodes acts as a client, and the other node acts as a server. Therefore, in the broadest sense, a client-to-client network is really made up of a client/server network.

34. The claimed invention describes a client-to-client network in use with a mediating server, which intercepts requests and responses between clients. As shown from the prior art used in the current rejection, Heddaya disclosed a client/server type of

Art Unit: 2143

communication model where a server that intercepts requests and responses, but also points out that the principals of the invention are **equally applicable to peer-to-peer networks**.

35. Further, it is clear from the numerous teachings (previously and currently cited) that the provision for using “using a mediating server in a client-to-client network” was widely implemented in the networking art.

36. Thus, Applicant’s arguments drawn toward distinction of the claimed invention and the prior art teachings on this point are not considered persuasive. It is also clear to the Examiner that Heddaya and Cieslak clearly teach the independent claims of the Applicant’s claimed invention.

37. Applicant’s arguments with respect to claims 1-28, 30-47, and 49-60 are deemed moot in view of the following new grounds of rejection, necessitated by Applicant’s amendment to the claims, which significantly affected the scope thereof.

38. Furthermore, as it is Applicant’s right to continue to claim as broadly as possible their invention, it is also the Examiner’s right to continue to interpret the claim language as broadly as possible. It is the Examiner’s position that the detailed functionality that allows for Applicant’s invention to overcome the prior art used in the rejection, fails to differentiate in detail how these features are unique. As it is extremely well known in the networking art as already shown by Heddaya and Cieslak as well as other prior arts of records disclosed accelerating receipt of data in a client-to-client network by using a mediating server is taught as well as other claimed features of Applicant’s invention. By the rejection above, the applicant must submit amendments to the claims in order to



distinguish over the prior art use in the rejection that discloses different features of Applicant's claimed invention.

39. It is the Examiner's position that Applicant has not yet submitted claims drawn to limitations, which define the operation and apparatus of Applicant's disclosed invention in manner, which distinguishes over the prior art.

40. Failure for Applicant to significantly narrow definition/scope of the claims and supply arguments commensurate in scope with the claims implies the Applicant intends broad interpretation be given to the claims. The Examiner has interpreted the claims with scope parallel to the Applicant in the response and reiterates the need for the Applicant to more clearly and distinctly define the claimed invention.

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure

relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to J. Bret Dennison whose telephone number is (571)272-3910. The examiner can normally be reached on M-F 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Wiley can be reached on (703)308-5221. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

Art Unit: 2143

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